

1 COOLEY LLP
2 HEIDI L. KEEFE (178960) (hkeefe@cooley.com)
3 MARK R. WEINSTEIN (193043) (mweinstein@cooley.com)
4 RONALD S. LEMIEUX (120822) (rlemieux@cooley.com)
5 KYLE D. CHEN (239501) (kyle.chen@cooley.com)
6 Five Palo Alto Square, 4th Floor
7 3000 El Camino Real
8 Palo Alto, California 94306-2155
9 Telephone: (650) 843-5000
10 Facsimile: (650) 857-0663

11 STEPHEN R. SMITH (*pro hac vice*) (stephen.smith@cooley.com)
12 One Freedom Square
13 Reston Town Center
14 11951 Freedom Drive
15 Reston, VA 20190-5656
16 Telephone: (703) 456-8000
17 Facsimile: (703) 456-8100

18 Attorneys for Plaintiffs
19 HTC CORPORATION and HTC AMERICA, INC.

20
21
22
23
24
25
26
27
28
UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
559
560
561
562
563
564
565
566
567
568
569
569
570
571
572
573
574
575
576
577
578
579
579
580
581
582
583
584
585
586
587
588
589
589
590
591
592
593
594
595
596
597
598
599
599
600
601
602
603
604
605
606
607
608
609
609
610
611
612
613
614
615
616
617
618
619
619
620
621
622
623
624
625
626
627
628
629
629
630
631
632
633
634
635
636
637
638
639
639
640
641
642
643
644
645
646
647
648
649
649
650
651
652
653
654
655
656
657
658
659
659
660
661
662
663
664
665
666
667
668
669
669
670
671
672
673
674
675
676
677
678
679
679
680
681
682
683
684
685
686
687
688
689
689
690
691
692
693
694
695
696
697
698
699
699
700
701
702
703
704
705
706
707
708
709
709
710
711
712
713
714
715
716
717
718
719
719
720
721
722
723
724
725
726
727
728
729
729
730
731
732
733
734
735
736
737
738
739
739
740
741
742
743
744
745
746
747
748
749
749
750
751
752
753
754
755
756
757
758
759
759
760
761
762
763
764
765
766
767
768
769
769
770
771
772
773
774
775
776
777
778
779
779
780
781
782
783
784
785
786
787
788
789
789
790
791
792
793
794
795
796
797
798
799
799
800
801
802
803
804
805
806
807
808
809
809
810
811
812
813
814
815
816
817
818
819
819
820
821
822
823
824
825
826
827
828
829
829
830
831
832
833
834
835
836
837
838
839
839
840
841
842
843
844
845
846
847
848
849
849
850
851
852
853
854
855
856
857
858
859
859
860
861
862
863
864
865
866
867
868
869
869
870
871
872
873
874
875
876
877
878
879
879
880
881
882
883
884
885
886
887
888
889
889
890
891
892
893
894
895
896
897
898
899
899
900
901
902
903
904
905
906
907
908
909
909
910
911
912
913
914
915
916
917
918
919
919
920
921
922
923
924
925
926
927
928
929
929
930
931
932
933
934
935
936
937
938
939
939
940
941
942
943
944
945
946
947
948
949
949
950
951
952
953
954
955
956
957
958
959
959
960
961
962
963
964
965
966
967
968
969
969
970
971
972
973
974
975
976
977
978
979
979
980
981
982
983
984
985
986
987
988
989
989
990
991
992
993
994
995
996
997
998
999
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1019
1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1039
1040
1041
1042
1043
1044
1045
1046
1047
1048
1049
1049
1050
1051
1052
1053
1054
1055
1056
1057
1058
1059
1059
1060
1061
1062
1063
1064
1065
1066
1067
1068
1069
1069
1070
1071
1072
1073
1074
1075
1076
1077
1078
1079
1079
1080
1081
1082
1083
1084
1085
1086
1087
1088
1089
1089
1090
1091
1092
1093
1094
1095
1096
1097
1098
1099
1099
1100
1101
1102
1103
1104
1105
1106
1107
1108
1109
1109
1110
1111
1112
1113
1114
1115
1116
1117
1118
1119
1119
1120
1121
1122
1123
1124
1125
1126
1127
1128
1129
1129
1130
1131
1132
1133
1134
1135
1136
1137
1138
1139
1139
1140
1141
1142
1143
1144
1145
1146
1147
1148
1149
1149
1150
1151
1152
1153
1154
1155
1156
1157
1158
1159
1159
1160
1161
1162
1163
1164
1165
1166
1167
1168
1169
1169
1170
1171
1172
1173
1174
1175
1176
1177
1178
1179
1179
1180
1181
1182
1183
1184
1185
1186
1187
1188
1189
1189
1190
1191
1192
1193
1194
1195
1196
1197
1198
1199
1199
1200
1201
1202
1203
1204
1205
1206
1207
1208
1209
1209
1210
1211
1212
1213
1214
1215
1216
1217
1218
1219
1219
1220
1221
1222
1223
1224
1225
1226
1227
1228
1229
1229
1230
1231
1232
1233
1234
1235
1236
1237
1238
1239
1239
1240
1241
1242
1243
1244
1245
1246
1247
1248
1249
1249
1250
1251
1252
1253
1254
1255
1256
1257
1258
1259
1259
1260
1261
1262
1263
1264
1265
1266
1267
1268
1269
1269
1270
1271
1272
1273
1274
1275
1276
1277
1278
1279
1279
1280
1281
1282
1283
1284
1285
1286
1287
1288
1289
1289
1290
1291
1292
1293
1294
1295
1296
1297
1298
1299
1299
1300
1301
1302
1303
1304
1305
1306
1307
1308
1309
1309
1310
1311
1312
1313
1314
1315
1316
1317
1318
1319
1319
1320
1321
1322
1323
1324
1325
1326
1327
1328
1329
1329
1330
1331
1332
1333
1334
1335
1336
1337
1338
1339
1339
1340
1341
1342
1343
1344
1345
1346
1347
1348
1349
1349
1350
1351
1352
1353
1354
1355
1356
1357
1358
1359
1359
1360
1361
1362
1363
1364
1365
1366
1367
1368
1369
1369
1370
1371
1372
1373
1374
1375
1376
1377
1378
1379
1379
1380
1381
1382
1383
1384
1385
1386
1387
1388
1389
1389
1390
1391
1392
1393
1394
1395
1396
1397
1398
1399
1399
1400
1401
1402
1403
1404
1405
1406
1407
1408
1409
1409
1410
1411
1412
1413
1414
1415
1416
1417
1418
1419
1419
1420
1421
1422
1423
1424
1425
1426
1427
1428
1429
1429
1430
1431
1432
1433
1434
1435
1436
1437
1438
1439
1439
1440
1441
1442
1443
1444
1445
1446
1447
1448
1449
1449
1450
1451
1452
1453
1454
1455
1456
1457
1458
1459
1459
1460
1461
1462
1463
1464
1465
1466
1467
1468
1469
1469
1470
1471
1472
1473
1474
1475
1476
1477
1478
1479
1479
1480
1481
1482
1483
1484
1485
1486
1487
1488
1489
1489
1490
1491
1492
1493
1494
1495
1496
1497
1498
1499
1499
1500
1501
1502
1503
1504
1505
1506
1507
1508
1509
1509
1510
1511
1512
1513
1514
1515
1516
1517
1518
1519
1519
1520
1521
1522
1523
1524
1525
1526
1527
1528
1529
1529
1530
1531
1532
1533
1534
1535
1536
1537
1538
1539
1539
1540
1541
1542
1543
1544
1545
1546
1547
1548
1549
1549
1550
1551
1552
1553
1554
1555
1556
1557
1558
1559
1559
1560
1561
1562
1563
1564
1565
1566
1567
1568
1569
1569
1570
1571
1572
1573
1574
1575
1576
1577
1578
1579
1579
1580
1581
1582
1583
1584
1585
1586
1587
1588
1589
1589
1590
1591
1592
1593
1594
1595
1596
1597
1598
1599
1599
1600
1601
1602
1603
1604
1605
1606
1607
1608
1609
1609
1610
1611
1612
1613
1614
1615
1616
1617
1618
1619
1619
1620
1621
1622
1623
1624
1625
1626
1627
1628
1629
1629
1630
1631
1632
1633
1634
1635
1636
1637
1638
1639
1639
1640
1641
1642
1643
1644
1645
1646
1647
1648
1649
1649
1650
1651
1652
1653
1654
1655
1656
1657
1658
1659
1659
1660
1661
1662
1663
1664
1665
1666
1667
1668
1669
1669
1670
1671
1672
1673
1674
1675
1676
1677
1678
1679
1679
1680
1681
1682
1683
1684
1685
1686
1687
1688
1689
1689
1690
1691
1692
1693
1694
1695
1696
1697
1698
1699
1699
1700
1701
1702
1703
1704
1705
1706
1707
1708
1709
1709
1710
1711
1712
1713
1714
1715
1716
1717
1718
1719
1719
1720
1721
1722
1723
1724
1725
1726
1727
1728
1729
1729
1730
1731
1732
1733
1734
1735
1736
1737
1738
1739
1739
1740
1741
1742
1743
1744
1745
1746
1747
1748
1749
1749
1750
1751
1752
1753
1754
1755
1756
1757
1758
1759
1759
1760
1761
1762
1763
1764
1765
1766
1767
1768
1769
1769
1770
1771
1772
1773
1774
1775
1776
1777
1778
1779
1779
1780
1781
1782
1783
1784
1785
1786
1787
1788
1789
1789
1790
1791
1792
1793
1794
1795
1796
1797
1798
1799
1799
1800
1801
1802
1803
1804
1805
1806
1807
1808
1809
1809
1810
1811
1812
1813
1814
1815
1816
1817
1818
1819
1819
1820
1821
1822
1823
1824
1825
1826
1827
1828
1829
1829
1830
1831
1832
1833
1834
1835
1836
1837
1838
1839
1839
1840
1841
1842
1843
1844
1845
1846
1847
1848
1849
1849
1850
1851
1852
1853
1854
1855
1856
1857
1858
1859
1859
1860
1861
1862
1863
1864
1865
1866
1867
1868
1869
1869
1870
1871
1872
187

NOTICE OF MOTION AND MOTION

2 PLEASE TAKE NOTICE that Plaintiffs HTC Corporation and HTC America, Inc.
3 (collectively “HTC”), before this case is submitted to the jury, move pursuant to Federal Rule of
4 Civil Procedure 50(a) for judgment as a matter of law on the grounds that defendants Technology
5 Properties Limited, Patriot Scientific Corporation and Alliacense Limited (collectively “TPL”)
6 have failed to present a legally sufficient evidentiary basis to find for TPL on any issue over
7 which it bears the burden of proof. More specifically, HTC seeks judgment as a matter of law on
8 the ground that: (1) HTC does not infringe any one of claims 6, 7, 9, 13, 14 or 15 of U.S. Patent
9 No. 5,809,336 (“336 patent”); (2) TPL has not shown that any alleged infringement by HTC was
10 willful; and (3) TPL has not provided legally sufficient evidence to sustain a claim of damages for
11 any alleged infringement. This Motion is based on the Memorandum of Points and Authorities
12 set forth below, the evidence and proceedings at trial, and such other matters as may be presented
13 at the hearing on Plaintiffs' motion and allowed by the Court.

MEMORANDUM OF POINTS AND AUTHORITIES

TPL failed to present any evidence at trial as to at least two elements of each asserted claim of the '336 patent. First, independent claims 6 and 13 require "*an entire oscillator* disposed upon said integrated circuit substrate and connected to said central processing unit." The Court has held that the term "entire oscillator" is "properly understood to exclude any external clock used to generate the signal used to clock the CPU." (Dkt. No. 616, at 2:6-7.) Second, each asserted claim includes the requirement of "varying the processing frequency of said first plurality of electronic devices and the clock rate of said second plurality of electronic devices in the same way as a function of parameter variation in one or more fabrication or operational parameters associated with said integrated circuit substrate." Because TPL failed to present sufficient evidence upon which a reasonable jury could find for TPL on either of these limitations, judgment as a matter of law of no infringement should be entered. TPL also failed to present any evidence that any alleged infringement by HTC was willful, and the evidence at trial negates both the objective and subjective prongs of the willful infringement test. Finally, TPL

1 has failed to present legally sufficient evidence to support its claim of a reasonable royalty from
 2 HTC.

3 **I. LEGAL STANDARD**

4 “A motion for judgment as a matter of law may be made at any time before the case is
 5 submitted to the jury. The motion must specify the judgment sought and the law and facts that
 6 entitle the movant to the judgment.” FED. R. CIV. P. 50(a)(2). A court may grant judgment as a
 7 matter of law against an adverse party if “the court finds that a reasonable jury would not have a
 8 legally sufficient evidentiary basis to find for the party on that issue.” FED. R. CIV. P. 50(a)(1).

9 **II. TPL HAS FAILED TO SHOW INFRINGEMENT BY HTC**

10 TPL has confirmed that its infringement claim against HTC is based entirely on *literal*
 11 infringement. (09/27/2013 Trial Tr. at 1012:25-1013:3.) Literal infringement is established only
 12 if TPL establishes that “every limitation recited in the claim appears in the accused device, *i.e.*,
 13 when the properly construed claim reads on the accused device exactly.” *DeMarini Sports, Inc. v.*
 14 *Worth, Inc.*, 239 F.3d 1314, 1331 (Fed. Cir. 2001) (internal quotations and citation omitted). “If
 15 any claim limitation is absent from the accused device, there is no literal infringement as a matter
 16 of law.” *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000).
 17 Judgment as a matter of law of no literal infringement should be entered because TPL’s evidence
 18 failed to establish at least two elements recited in each independent claim of the ’336 patent.

19 The Federal Circuit has made clear that the question of literal infringement is properly
 20 decided as a matter of law when, as here, there is no material dispute regarding the operation of
 21 the accused products. *See, e.g., MyMail, Ltd. v. Am. Online, Inc.*, 476 F.3d 1372, 1378 (Fed. Cir.
 22 2007) (“Because there is no dispute regarding the operation of the accused systems, that issue [of
 23 literal infringement] reduces to a question of claim interpretation and is amenable to summary
 24 judgment.”); *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1362 (Fed. Cir. 1999) (“Because the
 25 relevant aspects of the accused device’s structure and operation are undisputed in this case, the
 26 question of whether [the accused product] literally infringes the asserted claims of the [patent-in-
 27 suit] turns on the interpretation of those claims.”); *see also Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000) (“And the standard for granting summary judgment ‘mirrors’ the

1 standard for judgment as a matter of law, such that ‘the inquiry under each is the same.’” (quoting
 2 *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 250-51 (1986)).

3 **A. Defendants failed to show a clock or oscillator that generates a signal to clock
 4 a CPU without the use of an external clock**

5 The Court has held that the term “entire oscillator” is “properly understood to *exclude any*
 6 *external clock used to generate the signal used to clock the CPU.*” (Dkt. No. 616, at 2:6-7.) The
 7 testimony of TPL’s technical expert, Dr. Vojin Oklobdzija, confirmed that the accused HTC
 8 products include precisely what the Court found to be excluded by the claims – an “external clock
 9 used to generate the signal used to clock the CPU.” Dr. Oklobdzija’s testimony was also
 10 consistent with the testimony of every other technical witness who testified at trial.

11 As Dr. Oklobdzija acknowledged, although each accused HTC product includes
 12 Qualcomm, Texas Instruments (TI) or Samsung chips, for purposes of his infringement analysis,
 13 “they generally work the same way.” (09/26/2013 Tr. at 734:16-18.) In particular, each of these
 14 chips includes a Phase Locked Loop (PLL) that receives an input from an external (off-chip)
 15 reference signal which is based on a crystal. (*Id.* at 734:19-22, 735:6-19, 744:15-745:3.) This
 16 external reference signal is, according to Dr. Oklobdzija, “essential” to the PLLs in all of the
 17 accused HTC products. (*Id.* at 737:17-738:2.) The external reference produces a “stable” signal
 18 that “is used to adjust the frequency generated by the ring oscillator, so it has some relationship
 19 with it.” (*Id.* at 738:9-17.) The purpose of the PLL, in fact, is to adjust the frequency of the on-
 20 chip oscillator based on that reference. (*Id.* at 746:11-18.) The evidence at trial established that
 21 the Qualcomm, TI and Samsung chips at issue in this case all use such a PLL with an external
 22 reference signal. (See, e.g., Trial Exs. Ex. 3084 at HTCTP0075742 (TXCO), Ex. 3107 at
 23 QCHTCTPL0013601 (Fig. 12-1, TXCO), QCHTCTPL0013600, Ex. 3109 at
 24 QCHTCTPL0017373, Ex. 3112 at QCHTCTPL0024020, Ex. 3091 at HTCTPI0002154
 25 (CLK_REF), Ex. 3115 at TI-0001073 (CK_REF), Ex. 3100 at PIC00004245-46.)

26 Dr. Oklobdzija also acknowledged that the relationship between the frequency of the on-
 27 chip oscillator and the external clock is defined by a formula contained “in every textbook” that
 28 defines the relationship between the frequency of the reference signal and the output frequency of

1 the oscillator. (*Id.* at 739:12-24, 749:4-6.) The Qualcomm, TI and Samsung chips all use such a
 2 formula to define the frequency of the external clock. The notation used to express the formula
 3 may differ from chip-to-chip, but in each case, the formula expressly uses the external clock
 4 frequency. (See, e.g., Trial Exs. Ex. 3101 at QCHTCTPL0007812 (MSM7201), Ex. 3112 at
 5 QCHTCTPL0024021, Ex. 3115 at TI-0001076, Ex. 3117 at TI-0007192.) One example of a
 6 formula that was presented at trial in detail was the following formula that was used during Dr.
 7 Oklobdzija's testimony:

8 **5.1 Output Frequencies**

9 The PLL output clock frequency is given by:

10
$$f_{CLK} = f_{TCXO} * L * 2$$

12 (Trial Ex. 3027.0030.)

14 The formula shown above states that the output frequency of the on-chip clock (f_{CLK})
 15 equals the frequency of the external crystal clock (f_{TCXO}), multiplied by “L,” multiplied by 2.
 16 (09/26/2013 Tr. at 743:5-20.) The table below, from the same page of Exhibit 3027, shows the
 17 output signal frequency generated based on the external reference frequency (19.2 MHz)
 18 multiplied by “L” and 2. For example, for an “L” value of 10, the output of the on-chip clock will
 19 equal 19.2 MHz * 2 * 10, which equals 384 MHz. (*Id.* at 743:21-744:17, 748:22-749:6.)

21 **Table 5-1 PLL output clock frequencies with 19.2 MHz reference**

Input frequency	L	PLL_L_VAL[5:0]	Output frequency (MHz)
19.2 MHz	10	001010	384.0
19.2 MHz	11	001011	422.4
19.2 MHz	12	001100	460.8
19.2 MHz	13	001101	499.2
19.2 MHz	14	001110	537.6

26 (Trial Ex. 3027.0030.) Dr. Oklobdzija admitted that a manufacturer can select the “L” value
 27 depending on what it wanted to achieve in its product. (09/26/2013 Tr. at 746:8-18.)

As this example illustrates, the external clock in the accused HTC products is clearly used to generate the signal that clocks the CPU. This is because the external clock (represented for example by the input frequency or TCXO above) exerts direct control on the frequency of the on-chip oscillator (represented by the output frequency f_{clk}) in accordance with a fixed formula. The fact that the external clock is “used to generate the signal that clocks the CPU” is apparent from the fact that the output frequency of the on-chip clock is expressly calculated, in each instance, based on the input frequency provided by the external clock. And there is no dispute that all of the PLLs in all of the HTC accused products use a formula similar to the one above, and therefore, generates the clock signal as a function of the frequency of the external clock. This was confirmed through the trial testimony of Sina Dina, Baher Haroun and Thomas Gafford. (E.g., Trial Tr. at 350:7-17, 359:364:22-363:24, 365:17-366:1, 1046:9-14.) The evidence also makes clear that neither the PLLs nor the HTC phones themselves can function properly without the external crystal clock.

TPL’s argument at trial appears to be based on a reading the Court’s claim construction order as excluding only an external clock that directly generates the signal that clocks the CPU. The Court’s actual holding was not so narrow. The Court found that the “entire oscillator” excludes “any external clock ***used to*** generate the signal used ***to clock the CPU***.” The Court’s construction makes clear that if an on-chip “entire oscillator” uses any external clock to generate that signal, it does not meet the claim limitation. The external clock in the present case is indisputably used to generate the signal used ***to clock the CPU*** because, among other reasons, it is essential to generating that clocking signal.

B. TPL Failed to Show that the Processing Frequency of the CPU and the “Entire Oscillator” Vary In the Manner Required by the Claims

TPL also failed to show the element of “varying the processing frequency of said first plurality of electronic devices [for the CPU] and the clock rate of said second plurality of electronic devices [for the “entire oscillator”] in the same way as a function of parameter variation in one or more fabrication or operational parameters associated with said integrated circuit substrate.” The evidence at trial established that the accused HTC products use fixed

1 speed clocks that do not vary based on fabrication or operational parameters. As Mr. Dina
 2 testified, for example, “regarding PLL’s, I can tell you that PLL’s are designed to maintain the
 3 target frequency across PVT variations.” (Trial Tr. at 1062:2-3, 359:2-8 (Haroun).) Using a
 4 fixed speed clock to clock the CPU was important to enable the HTC phones to operate
 5 consistently across all conditions. (09/27/2013 Trial Tr. at 1031:9-1032:9.) The processing
 6 frequency of the CPU and the on-chip clock varies as a function of the formulae discussed above,
 7 which establish the output signal frequency based on the external reference signal and other
 8 factors relating to the PLL circuitry. None of the formulae for any of the Qualcomm, TI or
 9 Samsung chips recites process, temperature or voltage as playing any role in the determination of
 10 the output frequency of the on-chip clock. The testimony from Mr. Gafford also showed through
 11 empirical testing that the frequency of the on-chip clock moved up or down based on changes in
 12 the frequency of the external crystal clock – not based on variation across operational parameters
 13 such as temperature.

14 **III. TPL HAS FAILED TO SHOW WILLFUL INFRINGEMENT BY HTC**

15 A showing of willful infringement requires TPL to establish by clear and convincing
 16 evidence (1) that the accused infringer “acted despite an objectively high likelihood that its
 17 actions constituted infringement of a valid patent,” and (2) that this objectively defined risk “was
 18 either known or so obvious that it should have been known to the accused infringer.” *In re*
 19 *Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc). TPL did not establish either
 20 the objective or subjective prong at trial.

21 Under the objective prong of the willful infringement analysis, “a patentee must show by
 22 clear and convincing evidence that the infringer acted despite an objectively high likelihood that
 23 its actions constituted infringement of a valid patent.” *Id.* “The state of mind of the accused
 24 infringer is not relevant to this objective inquiry.” *Id.* This objective determination entails an
 25 assessment of the reasonableness of the accused infringer’s defenses, such as its arguments about
 26 non-infringement. *See Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d
 27 1003, 1006 (Fed. Cir. 2012). This objective prong presents a legal question for decision by the
 28 judge. “When a defense or noninfringement theory asserted by an infringer is purely legal (e.g.,

1 claim construction), the objective recklessness of such a theory is a purely legal question to be
 2 determined by the judge.” *Id.* at 1007. Even when the objective prong turns on factual issues,
 3 which is does not here, “the judge remains the final arbiter of whether the defense was
 4 reasonable, even when the underlying fact question is sent to a jury.” *Id.*

5 The evidence at trial established that HTC’s non-infringement defenses are, at a
 6 minimum, objectively reasonable. With respect to the “entire oscillator” limitations, it is
 7 undisputed that all of the HTC products rely on a PLL that uses an external clock to generate the
 8 signal used to clock the CPU. TPL has presented no evidence that HTC’s defenses are not, at a
 9 minimum, objectively reasonable. The objective reasonableness of HTC’s position is further
 10 confirmed by the fact that the named inventors of the ’336 patent – Mr. Moore and Mr. Fish –
 11 both shared HTC’s view regarding the scope of the alleged invention as not covering fixed speed
 12 clocks that rely on external PLLs. (*See, e.g.*, 09/24/2013 Trial Tr. at 312:7-17, 313:23:314:4,
 13 315:12-17.) HTC has consistently relied on these reasonable non-infringement defenses. (*See,*
 14 *e.g.*, Trial. Ex. 1118, at TPL853_02185142; Ex. 1282 at TPL853_02185820 (“However, without
 15 the reference signal from the external crystal, the ring oscillator variable speed system clock
 16 would not be generated by the ring oscillator.”).) TPL therefore cannot establish willful
 17 infringement as a matter of law.

18 **IV. TPL HAS FAILED TO PRESENT LEGALLY SUFFICIENT EVIDENCE OF DAMAGES**

19 TPL claims that HTC is liable for \$9,486,266.00 in damages for alleged infringement.
 20 TPL’s evidence and testimony offered at trial cannot support this claim.

21 TPL based its damages opinion on the entire revenue generated by the accused phones,
 22 which are complete, multi-component mobile handsets. Federal Circuit law makes clear that the
 23 entire market value rule is a “narrow exception” to the general rule that royalties cannot be based
 24 on the revenue of the entire product, but on the “smallest salable patent-practicing unit.”
25 LaserDynamics, Inc. v. Quanta Comp., Inc., 694 F.3d 51, 67 (Fed. Cir. 2012). This “narrow
 26 exception” applies only if the patentee can show that the patented feature drives the demand for
 27 the entire accused product. *Id.* “To employ the entire market value rule,” in other words,
 28 “plaintiffs first must show that the infringing feature is the primary reason that consumers buy the

1 product; the necessity of the infringing feature to the product is insufficient.” *Brocade*
 2 *Communications Systems, Inc. v. A10 Networks, Inc.*, No. 10- cv-3428 PSG, 2013 WL 831528, at
 3 *14 (N.D. Cal. Jan. 10, 2013) (Grewal, J.). TPL did not make any attempt to show that the entire
 4 market value rule applies here. The jury heard no evidence to show that the allegedly infringing
 5 features drive demand for the accused products. Dr. Prowse simply stated that he “determined”
 6 that the royalty base of the hypothetical license is the sales of all accused HTC products after he
 7 “looked at the data” in the case. (Trial Tr. 847:16-19.) TPL’s request for a “lump-sum” royalty
 8 payment does not provide an exception to the entire market value rule.

9 Dr. Prowse’s testimony also failed to meet the Federal Circuit’s requirement of using
 10 licenses that are comparable to the hypothetical license at issue. *See Uniloc USA, Inc. v.*
 11 *Microsoft Corp.*, 632 F.3d 1292, 1325 (Fed. Cir. 2011). Further, the comparability analysis
 12 requires that the patentee “account for differences in the technologies and economic
 13 circumstances of the contracting parties.” *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d
 14 1197, 1211 (Fed. Cir. 2011); *see also Trell v. Marlee Elecs. Corp.*, 912 F.2d 1443 (Fed. Cir.
 15 1990) (reversing damages award where the district court permitted the patentee’s expert to rely
 16 solely on a prior license agreement that included a license to the patent in suit, but “conveyed
 17 rights more broad in scope than those covered by Trell’s patent.”). Dr. Prowse’s analysis fails
 18 because the vast majority of licenses on which he relies are non-comparable.

19 Mr. Leckrone testified at trial that the most relevant licenses in calculating patent damages
 20 were the ones in the same industry segment as HTC. (Trial Tr. 405:3-9.). Dr. Prowse, however,
 21 despite relying on his interviews with Mr. Leckrone (9/26/13 Tr. at 858:16-22), chose to give the
 22 most relevant licenses in HTC’s industry segment – Mobile Communications – the *least* weight.
 23 Even more egregious is the fact that he didn’t give *any* weight to perhaps the most relevant
 24 license – the Apple license. (*Id.* at 872:9-14 (“Apple is not here. I did not consider Apple....”))

25 Instead, Dr. Prowse relied on over 100 licenses that were non-comparable to the
 26 hypothetical license at issue in this case. These licenses were non-comparable in that they: (1)
 27 granted patent rights far broader in scope than the hypothetical license at issue in this case, and
 28 (2) the licensees were not sufficiently similar to HTC.

1 First, the vast majority of those licenses granted patent rights far broader in scope than the
 2 rights to the '336 patent. These licenses were for the entire MMP portfolio, which includes at
 3 least seven U.S. patents, and several foreign patents and applications. (Trial Tr. 1142:5-6.) Here,
 4 however, the hypothetical license would grant HTC rights to only one patent within the portfolio.
 5 Again, TPL presented no evidence of the value of the '336 patent in relation to the other assets in
 6 the MMP portfolio.

7 Second, the licensees were not similar to HTC. Dr. Prowse grouped into "buckets"
 8 several licenses based on one factor that the licensees had in common with HTC, in isolation. Yet
 9 he did not account for any differences between HTC and the licensees. For example, in one
 10 bucket, Dr. Prowse considered companies whose only similarity with HTC was that they agreed
 11 to licenses purportedly around the time of the hypothetical negotiation date. (932:5-12.) Dr.
 12 Prowse did not explain to the jury what time period constituted a "similar time." Indeed, he
 13 included licenses dated over 16 months after the hypothetical negotiation date. (943:6-18.) He
 14 could not explain to the jury why he chose not to include only licenses entered into within a year
 15 of that date, when including only those licenses would have reduced the effective rates in that
 16 bucket by half. (*Id.*)

17 Dr. Prowse also grouped a separate set of licenses with companies whose only similarity
 18 with HTC was their revenue size. (881:2-7; 933:18-934:2; 943:19-25.) Dr. Prowse included in
 19 this bucket companies that make trucks and auto parts, along with a photography equipment
 20 company. (944:15-13-17.) When asked about these companies, Dr. Prowse agreed that "none of
 21 them are companies that compete with HTC and none of them make smartphones." (944:22-24.)
 22 Even within the mobile communications bucket, Dr. Prowse skewed the royalty rates upward by
 23 including Sierra Wireless, a company that does not make smartphones. (945:23-947:9.)

24 Perhaps most tellingly, Dr. Prowse could not show the jury that he had even a mere
 25 surface-level understanding of the licensees that he used to compare with HTC. (Trial Tr. at
 26 939:10-940:7.) Dr. Prowse also conceded that he did not perform any independent analysis of the
 27 industry "buckets." (*Id.* at 949:7-10.)

28

1 TPL also offered no evidence to support its damages rate of 0.125% for HTC. This rate is
 2 a dramatic increase over prior license rates that comparable parties actually paid. Dr. Prowse did
 3 not use sound analytics to support this rate at trial, and admitted that “there wasn’t a formula for
 4 coming up with .125 percent.” (Trial Tr. 936:7-8.)

5 The hypothetical negotiation applied in litigation assumes that the patent is valid and
 6 infringed. *See Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1325 (Fed. Cir. 2009)
 7 (“The hypothetical negotiation also assumes that the asserted patent claims are valid and
 8 infringed.”). Dr. Prowse used this legal fiction to inflate HTC’s royalty rate to almost 40 or more
 9 times higher than the rate HTC’s direct competitors in the relevant mobile communications
 10 segment paid. Dr. Prowse, however, presented no evidence that would support the specific
 11 increase in a royalty rate that TPL now seeks from HTC.

12 Dr. Prowse instead relied on TPL’s asking rates from parties – rates that ***nobody*** ever
 13 accepted – to support a “multiplier” based on the assumption of validity and infringement. TPL
 14 presented no evidence to the jury that HTC is the exception. First, Dr. Prowse assigned each of
 15 TPL’s prior licenses to one of six different licensing “tiers.” (Trial Tr. 860:5-8, 863:24-864:10.).
 16 Dr. Prowse stated that “it was TPL’s policy to attempt to receive higher royalty rates for
 17 companies that signed on in higher tiers, or later tiers.” (Trial Tr. 860, 13-15.) The tiered
 18 structure, according to Dr. Prowse, “indicated . . . that as more and more licensees signed on,
 19 there was less risk for them,” (Trial Tr. 862, 17-20), and “the patents became more valuable . . . ”
 20 (9/26/13, 863, 3-8.) Yet, Dr. Prowse admitted that “they weren’t the actual rates received from
 21 the licensees . . . ” (9/26, 862, 13-16.) Further, the actual rates received for the relevant industry
 22 segment licenses did not follow this structure. (*See generally*, 969:3-974:13.)

23 Next, each of these “tiers” was assigned its corresponding “tier multiplier.” Tier 1, for
 24 example, received the highest multiplier of 8.69. (9/26, 876:13-18 (“So what I did was I
 25 multiplied that rate by the sought for tier multiplier that represented the difference between tier 1
 26 sought for rates and tier 6 sought for rates, 8.69 . . . ”)). This “tier multiplier,” as Dr. Prowse
 27 explained, was intended to adjust the royalty rate for each TPL license to the level it would have
 28

1 been had it been negotiated without uncertainty regarding validity and infringement. (*See*
 2 *generally*, 876:13-23.)

3 Dr. Prowse then multiplied the royalty rate for each license by its corresponding
 4 “multiplier” to derive an “effective rate.” (935:16-19.) It was this dramatically inflated
 5 “calculated effective royalty rate,” and not the actual royalty rate derived from the amount paid
 6 by the licensee, that Dr. Prowse used as the basis for determining the reasonable royalty for HTC.
 7 (*See generally*, 935:16-936:8.) But Dr. Prowse’s “tier multiplier” methodology is unsupported by
 8 substantial evidence.

9 To begin with, it was TPL – not Dr. Prowse – who made the decision as to which “tier”
 10 would be assigned to each licensee. Further, there are numerous other flaws with Dr. Prowse’s
 11 tier multiplier calculation. For example, for Tier 1, Dr. Prowse obtained his “8.69” multiplier
 12 through a ratio between (1) the average royalty rates that TPL sought from companies in Tier 1
 13 and (2) the average royalty rates it sought from companies in Tier 6. (937:2-12) The problem with
 14 this analysis, however, is that it is based on the royalty rates that TPL sought from licensees in
 15 these tiers – in other words, the amount TPL was hoping it would obtain, but did not. (*See*
 16 *generally*, 960:9-963:21.) Indeed, Dr. Prowse admitted that the only Tier 6 company, LG, did not
 17 actually agree to a license, and that the value he used in calculating his tier multiplier was only a
 18 “sought for rate.” (960:9-22.) Considering that LG never actually took out a license, TPL’s use
 19 of this rate to dramatically increase HTC’s damages amount was egregious. Because TPL’s
 20 damages claim is based on these sought for rates, the fact that no licensees accepted these sought-
 21 for rates cannot support TPL’s damages opinion.

22 Dr. Prowse also claimed, without sufficient basis, that several prior licensees were given
 23 “discounts” for various reasons. (9/26: 883:3-8 (“[W]e’ve also talked about a second difference
 24 between the hypothetical negotiation and the actual licenses that TPL entered into, and that is a
 25 lot of the licenses that TPL entered into, they gave discounts for a variety of reasons . . .”)) Yet,
 26 Dr. Prowse admits that he has not quantified those discounts. (883:11-13.) Moreover, Dr.
 27 Prowse claimed that prior licensees received a discount for ease of negotiating. Yet, TPL’s Dan
 28 Leckrone admitted that TPL had been in communication for about a year before litigation was

1 initiated. On the contrary, the prior licensees that TPL said received discounts for being
2 cooperative ended up taking a license, in some cases, after more than two or three years of
3 negotiations. Dr. Prowse's testimony established no rational nexus between the evidence
4 pertaining to the "tiers" and the dramatic increase in the royalty rate that resulted from them.

5 Consequently, because neither TPL nor Dr. Prowse presented legally sufficient evidence
6 to the jury that its royalty base and royalty rates were appropriate, granting HTC's motion for
7 judgment as a matter of law against TPL's damages claim is warranted.

8 **V. CONCLUSION**

9 For the foregoing reasons, HTC respectfully requests that the Court grant judgment as a
10 matter of law under Rule 50(a) before this case is submitted to the jury. In the event the Court
11 denies or declines to rule on this motion, and any issue is found in favor of TPL, HTC reserves its
12 right to bring a renewed motion for judgment as a matter of law in accordance with Federal Rule
13 of Civil Procedure 50(b).

14

15

Dated: September 30, 2013

Respectfully submitted,

16

17

COOLEY LLP
HEIDI L. KEEFE
MARK R. WEINSTEIN
RONALD S. LEMIEUX
STEPHEN R. SMITH
KYLE D. CHEN

18

19

20

By: /s/ Mark R. Weinstein

21

Attorneys for HTC CORPORATION and
HTC AMERICA, INC.

22

23

24

25

26

27

28